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More Questions Every Airman Can Answer

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Foreword

We have entered a new millennium of struggle, challenge, and sacrifice. With the vicious attacks against our homeland on 11 September 2001, the fight against the global network of terrorism is our first major challenge in this new age. Wielding the long arm of air and space power, America's Airmen will be at the forefront of this fight, alongside our fellow Services, allies, and coalition partners.

To fight effectively, we must understand the basic truths about our air and space power capabilities. We must be able to articulate clearly, to any audience, our contributions to national defense. We have a continuing obligation to further our understanding of the Airman's perspective and to share it with others.

To that end, we've made great strides in capturing our operational war-fighting beliefs in our air and space doctrine. It represents our accepted best practices for how we leverage the power of air and space capabilities to create an asymmetrical advantage for our nation. It is not perfect,

and it is not supposed to be. It will change as we change.

This booklet is the continuing evolution of what we believe about air and space power. It is an effort to express—in the familiar way that made the first booklet of 50 questions a success—some of today's air and space power truths. While not official doctrine, it provides a quick, informal reference to the vital concepts in Air Force thinking that all Airmen should have at their fingertips. Current Air Force doctrine documents can be reviewed on the Internet at **<https://www.dctrine.af.mil>**. In the end, doctrine is not only our accepted best practices, it is our culture. Truly, it “lies at the heart of warfare.” Read, understand, debate, and define it!

JOHN P. JUMPER
General, USAF
Chief of Staff

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How does the Air Force contribute to homeland security?

In light of the terror attacks against the United States on 11 September 2001, all Airmen need to understand clearly what their Air Force brings to the homeland security “fight” and the new war against global terrorism. We should all realize that the first job of the Air Force is to defend the United States through control and exploitation of air and space. That’s why the Air Force immediately scrambled aircraft for combat fighter patrols over key US cities and why aircraft continue to be on alert around the country capable of responding to threats to our airspace, cities, and people. The Air Force has played and will continue to play the key role in the North American Aerospace Defense Command mission to monitor and defend North American skies.

Airmen also can take the fight to terrorist networks around the globe using a wide

array of weapons, aircraft, space capabilities, and information operations. One of the ways we can attack global terror networks is by using a crisis response task force specifically tailored for this mission. Real-time intelligence, surveillance, and reconnaissance information; communications connections; and robust Air Force command and control (C²) systems will enable sending real-time targeting information and the commander's authority and guidance directly to the cockpits of stealthy aircraft carrying precision weapons. This technology gives the Air Force unprecedented lethal capabilities to strike terrorist targets anywhere, anytime.

However, Airmen should recognize and take great pride in our other contributions to homeland security. In addition to combat air patrols over US skies, Airmen were hard at work on the ground, helping detect anthrax in New York and in Washington, D.C. The Air Force immediately responded with medical teams ready to assist civil authorities in New York in the aftermath of the World Trade Center attack. The Air Force stands ready to support local, state, and federal civil authorities in an emergency. Airmen

can deploy medical teams, communications support, civil engineering support, security forces, and aeromedical evacuation—to name just a few examples.

The bottom line: the US Air Force plays a key role in the war on terror and in defending our nation. We're prepared to support US civil authorities wherever we can and fight with other US military Services and allies against adversaries here or abroad. Be proud of what we've done, but be ready to do more.

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What is the Airman's perspective?

The perspective of Airmen involves a certain mind-set. It is a broad encompassing framework for thinking about present and future warfare. Our perspective is shaped by what we know and believe about the use of military force in four dimensions—speed, range, altitude, and time—and in relationship to the air and space operating environment. Therefore, the Airman's understanding of these dimensions in war is significantly different from and broader than the perspective of surface military forces. Even the units of measure we use are often quantitatively greater or more precise than other forces. For example, Airmen think of ever-increasing speed measured by mach, ranges in thousands of miles, altitudes in thousands of feet in the air or thousands of miles in space, and time compressing to fractions of seconds. To use a geometric analogy, we think of nearly limitless

maneuver along the x, y, z, and t axes. Air and space forces maneuver at high speed, at great ranges, at increasing altitudes, and in decreasing amounts of time to be able to produce military effects for the joint force commander (JFC). That kind of maneuverability gives the Airman a very distinct perspective. In geographic terms, the Airman naturally thinks about maneuver and effects on a theaterwide and global scale. Practically speaking, Airmen think of maneuver and effects in specific operations throughout the entire joint operations area (JOA), not merely in a narrowly defined, assigned, artificial geographic “box” like an area of operations (AO).



What is a commander?

A commander is delegated with the legal authority and responsibility to organize, equip, train, and employ forces to accomplish assigned missions. Commanders have responsibilities for the health, welfare, morale, and discipline of the forces assigned to them. Commanders often exercise their command responsibilities through an organization of personnel—the staff, which assists the commander. However, we should remember that the staffs do not command. Only commanders command. The legal authority and responsibility is vested in one person—the commander.



What is an “A-staff?”

The “A-staff” is the common name for the commander’s Service-related staff assigned to a numbered air force (NAF) or Air and Space Expeditionary Task Force (AETF). The A-staff is functionally organized by numbers typically running from 1 through 6—A-1 represents Manpower and Personnel staff elements; A-2 represents Intelligence, Surveillance, and Reconnaissance staff; A-3 represents the Operations staff; A-4 represents the Logistics staff; A-5 represents the Plans staff; and A-6 represents Communications and Information staff elements. The A-staff during peacetime manages the various day-to-day operations of the organization. We often think of the A-staff as providing the “beds, beans, and bullets” for the organization. During wartime, elements of the A-staff may move into the air and space operations center (AOC) organization, and some A-staff personnel will have responsibilities to perform

both administrative and operational duties. In some cases, when the commander, Air Force Forces (COMAFFOR) is appointed as the joint force air component commander (JFACC), the many details associated with the service-related requirements for the operation may exceed the new JFACC's ability to handle them. In those cases, much of the organize, train, equip and administrative issues (normally done by the A-staff) associated with keeping the force fed, fueled, armed, and equipped will be handled through reachback support by the next higher echelon or sustaining base. The authority to handle these service issues is delegated "up," so to speak, but the responsibility to make sure the force has what it needs to fight is still the COMAFFOR's responsibility.



What is leadership?

Leadership is a moral quality, in contrast to command, which is a legal authority. Leadership is simply an individual's moral requirement to guide others to accomplish a goal. The interesting thing about leadership is that it is not necessary to be formally appointed the leader to be a leader. In other words, one does not need to be a commander or a supervisor to be a leader. In fact, the Air Force encourages us all to be leaders, whether we are officers, non-commissioned officers, or airmen. However, to balance the scales, the Air Force needs good leaders who also know when to be good followers.



What are core values?

Core values are those essential moral principles or beliefs that are held in the highest regard by an individual or group. The Air Force core values—Integrity First, Service before Self, and Excellence in All We Do—represent the Air Force's firm convictions about the nature of our personal character, our commitment to each other and our nation, and the manner in which we perform our service. Reflecting the Air Force core values in one's personal and professional lives is a challenge that must be faced every single day.



What is a mission?

Joint Publication (JP) 1-02, *Department of Defense Dictionary of Military and Associated Terms*, defines mission as “the task, together with the purpose, that clearly indicates the action to be taken and the reason therefore.” Missions can be described in either broad or very specific ways. For example, the Air Force mission—To defend the United States and protect its interests through aerospace power¹—is a broad mission and involves the entire range of Air Force resources and capabilities to get this particular job done. On the other hand, “destroy the five enemy aircraft approaching from the north at 20,000 feet” is an example of a specific mission, normally given to a very specific unit or group with capability to do just that. The Air Force performs many subordinate tasks to accomplish the primary mission.



What is a core competency?

When we talk about core competencies, we are speaking about the big picture things that the Air Force does best, or is expected to do best, all of the time. Being competent means that a person or organization has the necessary abilities or qualities to perform or function successfully in a certain way. Core competencies are a smaller, key set of abilities or qualities that are at the heart of the organization's reason for being. Each of the Air Force's six core competencies is a direct reflection of the central purposes for which air forces exist. For the Air Force, our core competencies are those special abilities and qualities that we Airmen collectively possess that enable us to function successfully and create air and space power effects. Most of our core competencies are unique to the Air Force and distinguish us from our sister Services. For example, the US Air Force is uniquely qualified to provide air and space superiority,

precision engagement, global attack, and rapid global mobility. A few of our core competencies may also be core competencies of other Services as well. For example, information superiority and agile combat support undeniably are important abilities for our sister Services.² Obviously, their abilities in these areas help them focus on their unique core competencies, just as information superiority and agile combat support are essential parts of our overall capability to globally project American air and space power.



What are air and space power functions?

Air and space power functions are the “broad, fundamental, and continuing activities”³ of air and space power. They are tasks assigned by the Department of Defense (DOD), which authorize the Air Force to organize, train, and equip for the purpose of conducting “prompt and sustained combat operations in the air” and “strategic air and missile warfare.” Not all of the individual air and space power functions are wholly unique to the US Air Force, but, when taken together, they provide a full range and depth of capabilities that no other military forces possess. Based on our historical and contemporary war-fighting experiences, our technological expectations, and our vision of the future, we can distill from the air and space power functions the essence of what we do best—our six core competencies.



What are effects-based operations?

Effects-based operations (EBO) are military operations deliberately focused on achieving specific strategic, operational, or tactical effects, rather than deliberately focused operations against a particular target. EBO starts with clearly stated, achievable objectives and the commander's continuing guidance.

EBO reflects a priority focus on the big picture results and purpose of the operation rather than the technical details. Although the technical details are often critical, they do not—and should not—drive the train.

The historic approach to air and space operations has often been to focus on hitting specific tactical level targets “better” rather than achieving operational and strategic outcomes. Thus, over the years we have spent much time and effort developing

methods for identifying the “perfect target” in hopes that, when struck, the result would be a specific outcome.

Target selection has been, on more than one occasion, disconnected from strategy and operational art. Examples of that disconnect can be found in some of the operations during World War II and in Vietnam. Target selection should flow from an effects-based perspective. We developed very specialized ways to destroy or damage things with greater and greater efficiency, rather than spend time examining different ways to create the larger desired outcome. Picking targets should be at the tail end of the process, not at the front end. In contrast, EBO underpins modern air and space operations by keeping the ultimate reasons for what we are doing in view. To put it plainly, EBO steers us away from bombing bridges or whatever—fill in the blank—just because we’re good at it. *EBO makes precision and mass relevant and will directly shape decisions regarding priority and balance.*

To sum it up: Effects-based operations are, in effect, the manifestations of operational art. EBO puts the horse in front of the cart. It begins with clear military objectives and the statement of desired end states. Instead of target selection solely based on capability to attack specific types of targets, they are selected to meet the overall desired operational and strategic outcomes of the JFC.



What are measures of effectiveness?

A measure of effectiveness (MOE) is a pre-determined standard by which you can evaluate the performance of something else. Grades in school are used as measures of whether you learned something or not. According to Air Force Doctrine Document (AFDD) 1-2, *Air Force Glossary*, “a measure provides the basis for describing varying levels of task performance. A measure is directly related to a task.” In terms of air and space operations, MOEs are predetermined standards by which we can evaluate specific air and space operations to see if they have achieved the results, or effects, we expected them to achieve. Every objective should have a way to measure whether it has achieved its intended effect. MOEs help air and space planners and operators determine if the operations we plan and execute are creating the appropriate effects and achieving

the proper results. Think of MOEs as feedback generators. Determining what standard or standards will accurately and reliably measure air and space power effects and effectiveness is a very difficult process done within the AOC. However, it has to be done so the commander has the confidence that his or her strategy is working, otherwise, he or she won't know what to alter. In summary, the operational assessments that come from accurate and reliable MOEs make it easier for the commander to set priorities, preserve balance, and improve mass and concentration. Most importantly, accurate assessment through good MOEs preserves and enhances air and space power's flexibility and versatility.



What is operational art?

To paraphrase the definition in JP 1-02, operational art is the use of military forces to achieve the commander's objectives. Commanders do this by integrating and organizing their forces, designing a game plan (a strategy) to achieve the objectives, and using the game plan to guide the actions (the campaign) to achieve the objectives. To quote the source directly, "Operational art translates the joint force commander's strategy into operational design and, ultimately, tactical action, by integrating the key activities at all levels of war." Air and space operational art differs from the operational art of surface force commanders because air and space strategies are not linear nor are they directly related to geographic or topographic considerations. Finally, a person cannot be trained in the air and space operational art as you might train someone to change a tire. Expertise in opera-

tional art is only gained by breadth of experience, personal study, and professional education.



What is operational risk?

Operational risk is generally understood as the *probability* (not the possibility) and the *expected severity* of loss to friendly forces when engaged in specific combat operations. Operational risk is a factor that commanders must consider *before* employing their forces. Operational risk is captured by the questions, “How much am I likely to lose if I do things this way?” and “Is doing it this way worth losing that much?” Operational risk management is a process that commanders use to anticipate and then reduce risk to their forces. The bottom line: All military operations entail some risk to people and equipment. The commander decides how much risk he or she is willing to assume for specific operations. When the objectives are critically important, the commander may be willing to risk quite a bit; when the objectives are less critical, the commander will likely risk less. Finally, operational risk directly ties to the air and

space power tenets of balance and priority. Risk is one factor in achieving proper balance, while priority often determines the level of acceptable risk. Ultimately, commanders accept risk. They have that authority and are responsible for mission accomplishment.



What is a joint force?

The term *joint force* is a general military term used to describe a type of US military organization. It describes a single force under a single commander who has operational control of the force. The force must include significant elements from more than one US military department. Joint forces can exist at the unified, subunified, and task force levels. Examples of joint forces at the unified level include unified combatant commands like US Pacific Command, US European Command, or the US Joint Forces Command. An example of a joint force at the subunified command includes US Forces, Korea. An example of joint forces at the task force level includes the current Joint Task Force-Southwest Asia (JTF-SWA) enforcing United Nations sanctions against Iraq. A historical example is Joint Task Force Provide Promise (1993–1997), which was established to provide humanitarian relief to Bosnia during its civil war.



What is a joint task force?

A joint task force (JTF) is a type of joint force. JTFs can be designated by (1) the Secretary of Defense, (2) a theater commander in chief (CINC), (3) a subunified commander, or (4) an existing JTF commander. Usually, JTFs are joint forces established for specific missions and for limited time periods. They can be set up to perform a functional mission, for example, JTF-Computer Network Operations (CNO), which provides computer network protection of DOD networks or on a geographic basis (like JTF-Noble Anvil, which was the JTF established for Operation Allied Force in 1999).



What is a service component command?

A service component command is the service (Army, Navy, Air Force, Marine) contribution (people and resources) to a joint force. All joint forces have service components because each service has unique administrative and logistical requirements. Joint force commanders *do* conduct operations through service components. For the Air Force, our major commands (MAJCOM) are usually our service components for unified command level joint forces. For example, US Air Forces in Europe (USAFE) is our service component for US European Command. Sometimes a NAF is our service component command for a unified command. For example, the Fourteenth Air Force is our service component—Air Force Space Forces (SPACEAF)—for the US Space Command, while another NAF, Ninth Air Force (9AF), is our service component—US Central Command Air Forces (USCENTAF)—

for US Central Command (CENTCOM). When the joint force is organized at the JTF level, the service component command might be as small as a squadron or as big as a NAF, depending on the scope and mission of the JTF.



What is an Air and Space Expeditionary Task Force?

An Air and Space Expeditionary Task Force (AETF) is the organizational structure used to present the Air Force force deployed in support of a contingency operation. An AETF is composed of elements normally drawn from in-theater forces and supplemented as needed by the on-call numbered Air and Space Expeditionary Forces (AEF). Remember, the AEFs do *not* deploy—AETFs *do*. AEFs are the tool chest; AETFs are the actual tools—the screwdrivers and hammers—used for the job. AETFs can vary in size. Typically AETFs will range from squadron-size to NAF-size organizations. The AETF commander is the COMAFFOR.



What is a functional component command?

A functional component command is a subordinate command organization within a joint force made up of military elements organized together based on similar capabilities or functions. A functional component command is made up of elements from more than one military department. Just because there might be more than one US military Service represented in a functional component command does not mean it is a joint force, it is not—remember, it is only one piece of the joint force. So, for example, an air component command, organized functionally, could include both US Air Force and US Navy air forces: like fighter squadrons, attack aircraft, air mobility units, or surveillance aircraft. The Air Force prefers a functional command for air and space forces when we organize and fight jointly. From the Airman's perspective, it's simpler, safer, more efficient, more

economical, and more effective to orchestrate the entire joint air effort along functional lines. We believe a functional air component leads to greater synergistic effects. We believe it makes the JFC's job easier and it helps achieve his or her objectives faster.



What is a joint operations area?

A joint operations area (JOA) is a designated area of land, sea, and airspace, usually defined by a theater commander (a theater CINC), in which a JFC conducts military operations with an assigned joint force to accomplish a specific mission. Typically, a JOA is smaller in geographic area than the CINC's theater. Graphically, you could show this best by drawing a line on a map around some large geographic area made up of land and water, and the sky above it, to represent a theater (Europe, for example). Within that large area, you could outline a smaller, enclosed shape that could represent the enclosed area of the JOA within the larger area of the theater (the Balkans and the Adriatic Sea, for example). Most commonly, a JOA is established for a specific JTF. JOA boundaries generally enclose and correspond to the rough geographic area that falls within the direct influence of the JTF's military operations.

There can be more than one JOA in a CINC's theater if the CINC establishes multiple JTFs and then assigns them different JOAs within his or her theater.



Why is air and space superiority important for the joint force?

Air and space superiority is important because it gives the joint force commander the freedom from attack, freedom to maneuver, and the freedom to attack. Air and space superiority involves integrated air, space, and information operations that produce a state of relative advantage over an adversary. Achieving the effect of air and space superiority does *not* mean zero opposition; it means *no effective* opposition. Achieving air and space superiority quickly is a key enabler in allowing the JFC to seize and hold the operational initiative. The JFC can then maneuver other friendly forces (for example, the friendly surface and maritime forces) with a significantly reduced risk of attack against them by enemy air or space forces. As a historical textbook example, air and space superiority

in Desert Storm was quickly achieved. This allowed Gen H. Norman Schwarzkopf to immediately attrit Iraqi ground forces with airpower and to shift the XVIII and VII Corps into position for the "Hail Mary" maneuver without discovery by, or opposition from, Iraqi air or ground forces. As a result, the Iraqi ground forces were below subsistence levels when the coalition ground offensive began; and the coalition ground forces rapidly swept through the enemy ground formations and retook Kuwait in approximately four days. Most importantly for American military forces, air and space superiority during Desert Storm meant that the enemy was not bombing American and coalition infantrymen, tankers, and artillerymen. Air and space superiority is important because it reduces the overall risk to American lives on the ground. Finally, soldiers, sailors, marines, as well as Airmen, need to understand that air and space superiority is not free; you have to fight for it.



What is information power?

Information power is the ability to use information resources and forces⁴ to create discernable military and political effects. Together with airpower and space power, information power can help put friendly forces in a position of advantage. Information power is an inseparable part of the air and space power concept. Information power can be applied through kinetic (heat, blast, and fragmentation—bombs and bullets, basically) or nonkinetic means (through weapons or techniques that persuade, confuse, surprise, or contribute to the security of our forces). Further, information power can create lethal or nonlethal effects. For Airmen, our information power capabilities directly contribute to the joint force campaign in several ways. First, these capabilities help prepare and shape the overall information environment for the joint force commander before, during, and after combat. Second,

information power capabilities provide situational awareness to Air Force commanders about to employ air and space forces to achieve the joint force commander's objectives. Third, information power can create real physical or psychological effects upon our adversaries. These effects may be discrete (individual) effects. More often, however, information effects will enhance or support other physical or psychological effects created by other air and space forces. Finally, information power capabilities can directly support other airpower or space power missions.



How does the Airman view Information Operations?

The Airman views information operations (IO) as a broad set of information-related functions the Air Force performs to help achieve information superiority. Remember that information superiority supports efforts to achieve both air and space superiority. IO is conducted from peace through war. Airmen should also understand that IO involves efforts to gain (think “collect”) information and exploit it (think “use efficiently”), as well as operations aimed at attacking enemy information and systems and defending friendly information and systems. The key to understanding IO is that it uses a multidisciplinary approach. This means that many different Air Force functional areas and occupational specialties are integrated and then focused on creating specific information effects that help achieve the COMAFFOR’s or JFACC’s objectives. Air Force doctrine stresses that

no one functional area is more important to successful IO than another. Everything from communications, intelligence, public affairs, electronic warfare, and conventional air operations—to name just a few examples—can all contribute to successful information operations.



What are “organic” forces?

Organic means essential to the composition of something. Webster’s dictionary defines organic as “an integral element of a whole.” A simple example of something organic might be the human heart. It is “an integral element” of our bodies, and it is essential to being human and alive. When applied to military forces, organic forces are those forces that are assigned to and are an essential part of a particular military service’s organization. JP 1-02, the DOD dictionary, describes organic forces as those parts of a military unit that are identified in service tables of organization. Examples of organic military forces might include an armor brigade as an organic part of an armor division or the various Marine Corps units that comprise a Marine air-ground task force. For the Air Force, an example of an organic Air Force force might include a squadron of fighter aircraft assigned to a fighter wing, a maintenance

unit assigned to the same fighter wing, or an AOC assigned to a NAF or a MAJCOM.

Understanding the nature of organic forces is important because the label “organic forces” is sometimes used to claim “special exemption” from full integration of the joint force’s airpower capabilities into the joint air operations plan. Sometimes the claim of organic forces is used as a way to improperly shape supported/supporting relationships. The bottom line: To fight the joint fight effectively, we cannot have the joint force composed of service components that say, “What’s mine is organic, what’s yours is joint.” We all need to forego overly rigid adherence to the concept of organic forces if we want to fight in the most efficient and effective way possible.



What is the “Total Force?”

The United States Air Force is comprised of military and civilian (including contractors) members serving within three components—the active, Reserve, and Guard forces. Each component brings unique talents and capabilities that must be integrated together to perform the Air Force’s missions. Air and space power cannot be applied efficiently and effectively without the contributions of each component working together. The Total Force is one team. The Total Force is the United States Air Force.



What is an Air Force Force?

The term *Air Force force* (AFFOR) is a common, generic name for the US Air Force component assigned to a JFC at the unified, subunified, or JTF level. AFFOR includes the COMAFFOR, the AFFOR staff (A-staff/personal staff/special staff), the AOC, and all Air Force forces and personnel assigned or attached.



What is a commander, Air Force Forces?⁵

Clearly, a commander, Air Force Forces (COMAFFOR) is the single Air Force commander in charge of US Air Force forces presented (in other words, the US Air Force's war-fighting contribution) to a joint force. Normally, a COMAFFOR will be the Air Force commander of an AETF formed for a specific contingency or operation. Except in rare circumstances when the COMAFFOR is not the JFACC, there is no other commander in the operational chain between the COMAFFOR and the CINC or JFC. Five criteria outline the roles and responsibilities of the COMAFFOR:

- The COMAFFOR is a *war fighter* and *commander*. The COMAFFOR is not merely some "super" staff officer who oversees Air Force logistics, administration, and military discipline.

- The COMAFFOR is the Air Force's Service *component commander* in a designated joint force.
- The COMAFFOR in a joint force exercises *operational command authorities* delegated to him or her from the JFC or CINC, while at the same time the COMAFFOR receives *administrative control* through the Service chain of command.
- The *operational* chain of command takes *precedence* over the *administrative* chain of command.
- There is only one COMAFFOR in a designated joint force—there should *never* be more than one COMAFFOR in a designated joint force. However, in some situations, for example, when there are multiple JTFs in a single theater, there can be multiple COMAFFORs in the theater (one for each JTF).

Here's an example: The US Commander in Chief, Europe (USCINCEUR), is the commander of a designated joint force, US European Command (USEUCOM), at the unified command level. The Air Force MAJ-

COM commander in the European theater is the commander, US Air Forces in Europe (COMUSAFE). Since USEUCOM is a joint force, COMUSAFE is COMAFFOR under the USEUCOM CINC. If USCINCEUR establishes a joint task force for a specific operation in his or her theater and the JTF includes Air Force forces, then the Air Force commander presenting the Air Force forces to the JFC is the COMAFFOR. Finally, the COMAFFOR may delegate certain administrative duties to others—always the commander's prerogative—but doing so does not remove his or her responsibilities. In some cases, especially when the COMAFFOR is appointed a JFACC or combined force air component commander (CFACC) in a large or complex operation, he or she may not have the time to attend to some administrative or service duties. In those cases, some support activities can be performed by reachback support organizations.



What is an Air and Space Operations Center?

An air and space operations center (AOC) is an organization that uses defined processes and modern information systems to plan, employ, coordinate, and control air and space power capabilities. The AOC is the principal C² tool of the COMAFFOR. There should be only one AOC in each specific operation or contingency. Air Force Airmen believe the AOC is a unique Air Force weapons system in its own right. To operate at peak performance, the AOC needs to be manned by a cadre of trained, proficient Airmen. Just like the various components of the F-22 work together to give the whole jet certain tactical capabilities, the components of the AOC work together to give the COMAFFOR operational and strategic capabilities. AOCs are tailorable, modular, and scaleable. They come in different sizes and shapes depending on what the commander needs. The

commander can add to or subtract from the capabilities in the AOC to suit the needs of a particular operation and environment. The essential components of an AOC include a strategy-making group that can convert the JFC's broad guidance to specific operational tasks for air and space forces, a group that plans the air and space operations, and a group that coordinates and monitors the daily execution of the plan. Additional support from a host of "communities" in the US Air Force (intelligence, logistics, administrative, legal, and communications, to name only a few) can be added into the AOC mix to shape and speed the basic processes, thereby resulting in the production and execution of a great air and space plan.



When does the deployed commander need an AOC?

The most common answer is “always,” but the most precise answer is, “it depends.” The general rule of thumb is every time there is a significant deployment of US air and space power to support a military operation, the commander will need some way to command and control the deployed air and space force. The size and kind of organization to actually do the C² of the operation depend on size of the operation, size of the deploying air and space force, and the kind of operation being conducted. In most cases, when air and space power is a key element of the military force assigned to a specific crisis or contingency, a tailored AOC is either deployed forward or dedicated to supporting the deployed COMAFFOR through reachback. However, in some cases, when deploying a small unit (for example, a squadron-sized unit), or deploying Air Force forces in a small-scale mili-

tary operation where air and space power capabilities are not a predominant part of the military force, the COMAFFOR may only require a small C² capability, like a wing operations center (WOC). In other situations, like some humanitarian operations, an air mobility division might be the right answer. Bear in mind, the COMAFFOR in a small-scale contingency or the commander of a small unit will be able to use reachback to access the sustaining capabilities of the next higher echelon. That echelon can then provide her or him with basic strategy, plans, and execution support normally deployed forward as an AOC. The AOC can be tailored to the situation. What is important is the basic planning processes are accomplished so that air and space capabilities can make their full contribution.



What is the difference between an AOC and a Joint Air Operations Center?

An AOC is a service-unique, Air Force organic weapon system. A joint air operations center (JAOC) is a joint organization. Both do the same thing: provide the commander the ability to command and control air and space power. COMAFFORs command AOCs; JFACCs command JAOCs. Air Force AOCs can easily expand to become joint AOCs when the COMAFFOR is dual-hatted as the JFACC. The AOC becomes a JAOC by plugging in additional communications capabilities and by adding additional people from our sister Services that also employ air and space power capabilities. These additions to the AOC ease joint coordination and help integrate air and space forces from more than one service. Expanding the AOC to include non-Air Force resources ensures that other service

requirements and capabilities are accurately represented, fairly considered, and employed properly while planning and executing the JFACC's joint air and space campaign.



What is a Combined Air Operations Center?

A combined air operations center (CAOC) is a multinational organization that brings together the people, resources, and processes to plan and organize, and then command and control multinational air and space operations. During Operations DENY FLIGHT and DECISIVE FORCE (Bosnian operations), a CAOC was formed at Vicenza, Italy. A multinational staff at the Vicenza location directed the air forces from many North Atlantic Treaty Organization (NATO) and coalition countries, including the air and space forces of the United States. The same CAOC was used to exercise C² functions during NATO's Operation ALLIED FORCE (Serbia-Kosovo operations).



What sustains the deployed AETF?

When COMAFFORs have their hands full with war-fighting duties, they naturally turn to someone or something for additional support for their US Air Force administrative responsibilities. Oftentimes, additional people are deployed forward to help. Sometimes, however, it's just not practical or safe to deploy more people forward. In this situation, the Air Force commander should turn to his or her next higher echelon for immediate support. Therefore, if we think about the forward-deployed Air Force elements (the AETF) we should first look to the deployed force's next higher echelon in theater to support its deployed units and commanders. That next higher echelon is sometimes called the "AFFOR Rear." The AFFOR Rear is a sustaining organization that provides US Air Force-related support to its deployed subordinate forces. The AFFOR Rear is not in the operational chain

of command. Two things to remember, though: (1) There is no *formal organizational designation* as AFFOR Rear, and (2) there is no *formal command position* known as COMAFFOR Rear. These words are just convenient terms or jargon that capture the idea that the (deployed) COMAFFOR and the AETF must get additional support and assistance from a sustaining base or command usually located to the “rear.”



What is the difference between a COMAFFOR and a JFACC?

The COMAFFOR is a service component commander. He or she commands Air Force forces. A JFACC is a functional component commander who commands the joint air and space forces (air and space forces from more than one military department) in a joint force for the JFC. In joint doctrine, JFACCs are appointed by the JFC. JFACCs are typically service component commanders with the largest share of air and space forces and the ability to command and control them. When the US Air Force presents air and space forces to the joint force, it does that through the COMAFFOR. Usually, the COMAFFOR has the largest share of organic air and space forces in the joint force and the ability to command and control them. The COMAFFOR usually, but not always, is appointed the JFACC.



What is a Combined Force Air Component Commander?

A combined force air component commander (CFACC) is a functional component commander of air and space forces in a multinational military force. The multinational military force could include air forces from allied nations (like NATO) or air forces from nations joined with us in a coalition (as in Desert Storm). Generally speaking, the CFACC is the air and space commander with the largest share of air and space forces and the ability to command and control them. When the United States participates in a multinational operation and presents a joint force that includes US air and space forces to the (multinational) combined force commander, the US JFACC often becomes the CFACC, because the JFACC has the preponderance (largest share) of air and space forces and the means to command and control them. And by the way, a CFACC commands air and space power through a CAOC.



What is apportionment?

Apportionment, in the broad sense, is the general sharing of limited resources among competing needs. Apportionment of air and space resources is an important step on the way to an air and space operations plan that supports the JFC's objectives. Normally, the JFC will consult with his or her air and space component commander to share the air and space force's capabilities among the priority needs. Normally, the air and space commander will recommend a way to apportion the air and space force to the JFC, but the JFC makes the call. The JFC apportions the air and space force to support the various objectives of the joint force. To use an analogy, it is a lot like deciding how to slice up a pie. In this case, some slices will be wider than others (more resources and effort) based on the JFC's priorities. The size of the pie slices represents the distribution of the expected air and space

power effort by percentages, priorities, or desired effects (or sometimes a combination of the three) over an expected period of time.



What is allocation?

Allocation is also the sharing of limited resources among competing needs. It differs from apportionment in that allocation is sharing for *actual use (employment)*, rather than sharing for *planning* purposes. It is a more detailed effort than the broad apportionment distribution. For Airmen, allocation means the air and space commander has determined the total numbers of sorties by aircraft type available for each operation or task that has been previously defined and prioritized by the JFC.



What is an air campaign?

First off, according to the DOD dictionary, a campaign is “a series of related military operations aimed at accomplishing a strategic or operational objective within a given time and space.” The term *air campaign* is a common expression among Airmen for the air operations portion of a joint campaign, but it is a bit of a misnomer. We often use air campaign to express the air and space contribution to the joint effort. The air and space component commander’s vision of the air and space operation is captured in the joint air operations plan (JAOP). Really, the only commander who plans and executes a full “campaign” is the JFC. Air and space forces and operations support that *joint* campaign. While it’s not “against the law” to use the words *air campaign*, just understand that the air campaign is really just one piece of the joint campaign. Even in a situation where the joint operation is pre-

dominantly made up of air and space operations, it's still a joint campaign. Operation ALLIED FORCE is a good example of an "air" heavy joint campaign.



What is halt?

Halt is one possible step in a joint campaign that the JFC can use to stop or “halt” adversary aggression. Halt is a conceptual period of time in the course of an actual operation when friendly military force is rapidly applied against an adversary to stop them from achieving their operational objectives. Halt can be used to force the enemy to the point where they cannot sustain offensive operations any longer. That point is often called the “offensive culminating point.” Once past that point, the enemy has essentially lost the initiative. Once the initiative is lost, enemy operations are essentially reactive instead of proactive—generally speaking, it is pretty hard to regain the initiative again. According to JP 3-0, *Doctrine for Joint Operations*, halt is contained in the Seize the Initiative Phase of a joint campaign.



Why is the halt concept important?

The Air Force embraces the halt concept because Airmen, as do our sister Services, believe it makes good sense to make every effort to quickly deny the initiative to an enemy. Since air and space forces have superior speed, precision, and range, we believe it is a job for which air and space forces are well suited. We think that immediately focusing air and space power against an enemy's offensive operations can be a very efficient way of seizing the initiative from an aggressive adversary and preparing the way for other joint or multinational forces to be employed. This is not to say that air and space power is the only way to seize the initiative or always the most efficient way to seize it. Any military force can be used to halt the enemy if it is properly prepared to do so, if the battle-space environment is suited to that force's employment, and if the commander judges

the use of that kind of force is appropriate for the situation. Remember, the alternative to halting the enemy is that you allow him to retain the initiative; this increases the likelihood the enemy will achieve his initial objectives.



What is a Joint Air Operations Plan?

The joint air operations plan (JAOP) is the air and space commander's game plan that outlines how he or she will conduct joint air and space operations to support the JFC's campaign. The JAOP is drawn from the air and space commander's course of action once it is approved by the JFC. The JAOP is then "built" based on a comprehensive assessment of the operational environment (a big picture review of the whole battle-space—not just the bad guys but friendly forces too). The JAOP should clearly state our objectives, identify the key adversary centers of gravity, and spell out the joint air and space strategy.

A good JAOP will (1) lay out the priority of objectives and targets, (2) tell you what effects are expected when the targets are attacked, (3) spell out how much effort is required to achieve the desired results, (4)

consider the enemy's current and potential capabilities, (5) provide an effective way to integrate joint air capabilities, and (6) lay out the expected phases of the joint air effort as they relate to the JFC's plans. The whole JAOP process is complex because there are many ever-changing variables to worry about, but the bottom line is that the JAOP is the first statement of the JFACC's game plan. Once a JAOP is developed, it is a springboard to building Master Air Attack Plans (MAAP) and the daily air tasking orders (ATO).



What is a Master Air Attack Plan?

The Master Air Attack Plan (MAAP) is where the rubber first meets the road in air and space operations. The MAAP is developed in the AOC. The MAAP begins to spell out the details of the air and space commander's scheme of maneuver. The MAAP stacks the prioritized targets, say in column "A," and matches them against the available air and space capabilities that can affect them, say in column "B." To create a useful MAAP, air and space planners have to consider how to sequence attacks in relation to the campaign phases, the characteristics of the targets themselves, the risks involved, the potential gains, and what friendly air assets are actually available to do the job. The MAAP will spell out the kinds of aircraft to be used, the target, and the expected sequence of activity. Once a MAAP is developed, it provides the basic data for developing a daily ATO.



What are mission-type orders?

Missions are clearly spelled out tasks with a specific purpose. Mission-type orders are orders that reflect the commander's basic intentions for a specific operation. Instead of spelling out every single little detail to accomplish a job, a mission-type order provides general guidance for action. Mission-type orders tell you *what* needs to be done, not *how* to do it. If a horde of bad guys is coming your way, mission-type orders might say, "It's really important that the bad guys don't get to the snack bar, stop them before they get there." Mission-type orders give the folks who have to actually do the job the latitude to figure out how to do it best given their own particular circumstances. If you understand the commander's intent—that is, what he or she basically wants to see happen—and you have the legal authority to conduct operations based on that intent, then you have mission-type orders. (Basically, you are given broad authority in

the form of an order to take appropriate actions and employ weapons and capabilities to meet the commander's objectives.) If you understand the commander's intent and have mission-type orders, then you can react faster to rapidly changing emergencies without always having to ask, "Mother, may I?" Mission-type orders *do not*, however, give a person free rein to violate existing laws, ignore the rules of engagement (ROE), or disobey other specific directions or orders.



What is the Air Tasking Order?

The air tasking order (ATO) is a product developed in the AOC that directs the execution of air and space power on a daily basis during a crisis or contingency. It lists the mission type (for example, whether it is a close air support [CAS] mission or an interdiction mission), the specific target(s) to be struck, the specific unit(s) tasked to do the job, when the target should be struck, the kinds of aircraft or assets to be used to strike the targets, the mission numbers, and the kinds of weapons to be used to do the job. The ATO is sent from the AOC to the various units designated to accomplish the various missions listed on it. The local units immediately begin mission planning. Generally, this involves determining the safest routes to the target, take-off times, the timing of attack, refueling requirements, emergency procedures, and the appropriate tactics to use to best attack the target. Once mission planning is

complete, the mission is flown. Normally, there is an ATO being executed (today's war) and one being planned (tomorrow's war). While the ATO is a schedule of sorts, Airmen firmly believe that flexibility is the key to air and space power; thus, when more urgent requirements emerge or priorities change, air and space operations immediately flex to meet those new needs. A strength of the ATO is that it defines a game plan from which you can deviate quickly when flexibility is required. It provides in one document a reference to what air and space assets are available for retasking when priorities shift. It also can help commanders prioritize and balance their efforts by showing what targets and effects will not be accomplished if air and space assets do need to be retasked. Bottom line: The ATO gets everyone on the same sheet of music, allowing the commander to centrally control air and space power while the subordinate commanders execute their specific missions in a decentralized fashion.



What are Rules of Engagement?

Rules of engagement (ROE) are directives issued by competent military authority that spell out the specific or general circumstances and limitations under which US forces will engage in combat with other forces. ROEs can be very specific or very broad. In general, ROEs tell you how you can defend yourself, what can be attacked, how and when you can attack it, and whose permission you need to attack. Standing ROEs are basic rules that always exist—for example, the right of US forces to defend themselves if attacked. Effective ROEs can help prevent collateral damage and civilian casualties, reduce the risk of fratricide, preserve political will, and keep the operation on track.



What is battle rhythm?

Battle rhythm is the operational tempo that radiates from the JFC throughout the joint force. It may sound weird, but battle rhythm is really about harmony. More specifically, it is about harmonizing your actions with the actions of those above, below, and around you. It is best to be in harmony with the commander's operational tempo; it is a more efficient use of effort. Now this does not mean you just "go with the flow." Instead, it means you make the most of the environment and the operational tempo. Good battle rhythms balance the physical needs of the commander and staff against mission requirements in a way that will allow the commander and staff to fight continuously and effectively for extended periods of time.

To better understand battle rhythm, you need to think about synchronization (the arrangement of actions over time) and pri-

ority over a 24-hour period. For example, in the heat of a crisis, lots of things are happening. Some of them are important; others are not. Every day the JFC will attend meetings, establish priorities, outline expectations, assign missions, and establish deadlines. To facilitate the effort, the JFC will expect the staff to produce certain products on a daily basis that help him make decisions to shape and guide the actions of the joint force. He will have an agenda and a rough schedule set up to bring some order to the chaos normally associated with running large military operations. In addition, he will need to think and rest. The component commanders will, in turn, hold their own meetings, establish their own supporting priorities, outline their expectations, give out taskings, and set their own deadlines for things to happen. They will also need to think and rest. They do all this to manage as much as possible the natural and inevitable chaos at their own level.

These many schedules and agendas can conflict with each other, creating friction. To reduce friction and increase efficiency, it is

best to know when the important things are happening, what the key meetings of the day are, and when critical things are due. Then arrange how you do things to coincide or “sync up” with the operational pace of the boss’s rhythms. Establishing your personal battle rhythm in harmony with those around you is crucial; it will allow you to be more effective over the long haul and better support the needs of your boss and on up through your chain of command.



What is reachback?

Reachback is a way of getting additional help like people, equipment, or specific information when you are forward deployed. Air Force doctrine describes reachback as “the process of obtaining forces, materiel, or information support from Air Force organizations not forward-stationed or forward deployed.” Usually requests for reachback support are sent up the chain from the deployed unit to the next higher echelon in the rear that tries to fulfill the request for support. In some instances, deployed commanders are authorized to reachback directly to specific organizations for support without having to send the formal request up the chain. All air and space operations rely on reachback support to conduct effective operations.



What are distributed operations?

Distributed operations are a way of sharing the common workload to get a specific job done. Distributed operations are those air and space operations conducted from independent or interdependent nodes in a teaming manner. The goal of distributing operations is to support the operational commander in the field; it is not a way of commanding from the rear.



What are split operations?

Split operations are one type of distributed operations. Split operations describe those distributed [command and control] operations conducted by a single C² entity divided between two or more geographic locations. A single commander must have oversight of all aspects of a split C² operation. For example, if part of an AOC is in one location and another part is somewhere else—but they are connected by robust communications and have a single commander—then the operation is considered a “split operation.” Split operations offer the air and space commander flexibility and can serve to limit the number of people and the amount of equipment and material that needs to be forward deployed. This reduces the strain on the supply system and reduces operational risk in some cases. Instead of moving people and stuff, you’re moving information.



Is Close Air Support important to the Air Force?

Absolutely! Countless Airmen have paid the ultimate price while performing close air support (CAS) in direct support of ground forces. Airmen unanimously agree that when friendly lives are in the balance, we will do whatever is required to achieve the desired effects—whether that means destroy, disrupt, divert, delay, or halt the enemy force. A more accurate question is this: Why is there a perception that CAS is not important to the Air Force? Though confined by space, we'll look at three areas that feed this perception.

First, Airmen believe in centralized control of air and space power, led by an Airman and executed through a decentralized structure. This is counter to most ground commanders, who want control over a portion of air power to ensure the accomplishment of his/her objectives. This “lack of

control” leads to a cautious relationship in regard to direct support missions like CAS.

Second, as a rule, Airmen feel the best uses of air and space power in order are air superiority, strategic attack, air interdiction, and CAS. Ground components believe the CAS ranking is equivalent to its importance. In reality, the Airman ranks CAS based on efficiency, not importance. CAS is a most rewarding and important mission (directly affecting the survival of friendlies), yet it is also the most inefficient method of employing air power. Airmen believe that it is more effective and efficient to engage the enemy before entering the realm of close proximity and detailed integration.

Third, Airmen think in terms of missions, not platforms. As such, Airmen usually prefer multirole aircraft that are flown by well-trained aircrews. While not focused solely on CAS, the multirole aircraft provides greater flexibility and capability to the JFC who is responsible for achieving theater objectives. Meanwhile, the trained aircrew provides the critical link—know-how—to successful CAS operations.

In conclusion, CAS is important to the Air Force. The perception that CAS is not important generates from the differing perspectives on the “best” practices of air and space power. Let the record stand, Airmen have been, currently are, and always will be available for CAS.



Why does an Airman need doctrine?

Every Airman, from the newest airman basic to the most senior general, needs doctrine to fundamentally understand how he or she contributes to making our Air Force the best in the world. It tells us how to effectively and efficiently apply air and space power to help defend the nation and help it achieve its goals. Understand that your doctrine is the Airman's inheritance, passed down to us from Airmen before us. It is our war-fighting legacy. Doctrine tells us who we Airmen are and why our Air Force exists. Doctrine is the distilled war-fighting experience and thought of our service's heroes, leaders, theorists, and scholars, but most importantly, it captures and crystallizes the war-fighting lessons learned of everyday Airmen throughout our service's history. Finally, we need to remember that it is our responsibility today to continually improve Air Force doctrine

through experience and debate, so that we can pass down our best practices and our lessons learned to tomorrow's Airmen. Pass the torch, every day.



What question did we forget?

Now some might suggest that this is an artful dodge, but the truth is many of the questions answered here resulted from inputs from Airmen, both officer and enlisted, from around the globe. It worked once, it might work again.

Notes

1. *America's Air Force: Vision 2020* (Washington, D.C.: Department of the Air Force, 2000), 2.

2. The other US Services might refer to these abilities or qualities in different terms, but they are, in each case, important for projecting military maritime or surface power.

3. AFDD 1, *Air Force Basic Doctrine*, September 1997, currently outlines air and space power functions. Air and space power is defined as the "synergistic application of air, space, and information systems to project global strategic military power."

4. By "resources and forces," we mean the trained people, the wide variety of air and space information systems and platforms within the Air Force, the processes to employ them in war-fighting situations, and Air Force information operations organizations that come to the fight with information power capabilities.

5. This question appears in *50 Questions*, but, because some confusion remains about the role and responsibilities of the COMAFFOR, it is readdressed here.

Author's Note

Personally, I like short words and vulgar fractions.

—Sir Winston Churchill

I deeply appreciated the opportunity the Air Force Doctrine Center gave me two years ago to put together a short list of what I thought were some important questions and answers that we Airmen ought to know. Feeling emboldened recently, I began mentally collecting the next 50 questions. This is the result. Then, as now, I had lots of help. So, once again, I would like to say thanks to all my fellow unapologetic air and space power advocates at the Air Force Doctrine Center. In truth, this was a major team effort and many folks made contributions, large and small. Much thanks to Col Ron Baughman, Lt Col Bob Christensen, Maj Mark “Buster” Douglas, Maj Kevin “Bat” Masterson, Maj Quentin “Q-Tip” Rideout, Capt Carolyn “KV” Knutson-Vaccaro, and last but not least Lt

Cols Jim Cresta and Mike “Dutch” Dietvorst, USAF Retired, and my favorite curmudgeon-at-large, Bob Poynor, all of whom provided excellent inputs to this effort. A very special thank you goes to Maj Hugh “Huge” Curry who labored over this project as if it were his own after I left AFDC for the balmy climes of Hawaii in August 2001. Thanks, Huge, I salute you. As before, I’ve attempted to answer the questions simply for my own benefit; hopefully, it can be of service to you and other Airmen. Finally, I’d like to dedicate this effort to my brother, Specialist Fourth Class Paul J. “Jeff” Cochran, United States Army, killed while serving his country in the Republic of Vietnam, 1 May 1968.

About the Author

Maj Frederick L. "Fritz" Baier originally enlisted in the Air Force in May 1979. He is a career intelligence officer currently assigned to the Pacific Air Forces Air Intelligence Squadron at Hickam AFB, Hawaii. He previously served a tour at the Air Force Doctrine Center where he was responsible for Air Force intelligence, surveillance, and reconnaissance, information operations, and military operations other than war doctrine. Major Baier is a distinguished graduate of Air Force Reserve Officer Training Corps and the Air Force Intelligence Officers Course. He holds a bachelor's degree in political science and a master's degree in international relations, both from California State University, Fresno. He has had a variety of intelligence assignments and served in Operations Desert Shield/Storm, Provide Comfort II, and Provide Promise. Major Baier is the author of *50 Questions Every Airman Can Answer*.